

REMARKS

Status of the Application

This amendment is filed in response to the Office Action dated December 13, 2007. Claims 1-30 were pending. The Office Action finally rejected claims 1-30. No claims are amended by way of this response. Thus, claims 1-30 remain pending and at issue.

Rejection under 35 U.S.C. §102

Claims 11, 13-14, 18-21, and 26-30 were rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent Application Pub. No. 2004/0010785 to Chauvel et al. (hereinafter “Chauvel-1”). Applicants respectfully traverse this rejection.

Claim 11

Claim 11 is generally directed to a method that recites “receiving a plurality of non-native instructions; executing the non-native instructions for an initial number of times using an interpreter; and compiling the non-native instructions into object code after executing the received non-native instructions for said initial number of times using the interpreter.”

Chauvel-1 does not disclose this combination of elements. Instead, Chauvel-1 describes counting the number of times operations are executed within an application to determine an application profile for comparison with a virtual machine profile. Chauvel-1 also mentions that its profiling techniques may be “adapted to take into account an interpreter-based execution and a JIT [just-in-time compiler] one.” Chauvel-1, par. [0063]. Chauvel-1, however, does not disclose or suggest executing non-native instructions for an initial number of times using an interpreter and subsequently compiling the non-native instructions as recited in claim 11.

In order for a reference to be anticipatory, “[t]he identical invention must be shown in as complete detail as contained ... in the claim.” *MPEP* §2131, citing *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236 (Fed. Cir. 1989). The general statement in Chauvel-1 that its profiling

techniques may be “adapted to take into account an interpreter-based execution and a JIT one.” is not a disclosure of “compiling the non-native instructions into object code after executing the received non-native instructions for said initial number of times using the interpreter.” At least for these reasons, Chauvel-1 does not disclose or suggest each and every element of claim 11 and thus, Chauvel-1 does not anticipate claim 11.

Claims 13-14, 18-21 and 26-30

With regard to claims 13-14, which depend from claim 11, Applicants respectfully submit that Chauvel-1 does not anticipate claims 13-14 at least for the same reasons as claim 11.

With regard to claims 18-21 and 26-30, Applicants respectfully submit that Chauvel-1 does not anticipate claims 18-21 and 26-30 at least for reasons similar to those discussed above with respect to claim 11.

Rejections under 35 U.S.C. §103

Claims 1-10, 12, 15-17, and 22-25 were rejected under 35 U.S.C. §103(a) as being unpatentable over Chauvel-1 in view of U.S. Patent No. 7,146,613 to Chauvel et al. (hereinafter “Chauvel-2”). Applicants respectfully traverse this rejection.

“To establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art.” *MPEP* §2143.03, citing *In re Royka*, 180 USPQ 580 (CCPA 1974). As will be explained further with reference to specific claims, the Office Action failed to establish that the alleged combination of Chauvel-1 and Chauvel-2 teaches, discloses, or suggests each and every element of each of claims 1-10, 12, 15-17 and 22-25.

Claim 1

Claim 1 is generally directed to a method that includes “compiling [a] plurality of non-native instructions [in a selected one of a source form and an intermediate form] to generate object code for the non-native instructions, wherein compiling the plurality of non-native

instructions (*e.g.*, source or intermediate form) includes replacing an object code segment from the generated object code with an alternative object code segment if the alternative object code segment improves at least a selected one of a power level required and an amount of energy required to execute the generated object code in a target execution environment.” At least this element is not disclosed or suggested by the alleged combination of Chauvel-1 and Chauvel-2.

The Office Action admits that Chauvel-1 does not disclose this element, but then alleges that such element is disclosed by Chauvel-2. But Chauvel-2 describes byte code substitution, and byte code is not object code as recited in claim 1. Rather, byte code in the context of claim 1 is an intermediate form that is subsequently compiled into object code. For example, Chauvel-2 describes a modified Java® Virtual Machine (JVM) at a computer that receives machine-neutral byte codes. The modified JVM then inspects the received byte codes to improve byte-code execution by “sequence recognition and proprietary JAVA-DSP byte-code substitution in the classes” (col. 5, lines 31-32, *emphasis added*). Chauvel-2 further describes that the byte code substitution reduces a number of byte code instructions and, thus, increases execution performance. The described JVM then compiles the reduced byte codes into machine-specific object code that may then be executed by the computer. In other words, Chauvel-2 describes improving the execution of an application by replacing portions of a received byte code sequence with proprietary byte code during the JVM’s interpretive process that occurs before the byte code is compiled to machine-specific object code.

At least for these reasons, the alleged combination of Chauvel-1 and Chauvel-2 does not render claim 1 unpatentable.

Claims 2-10, 12, 15-17, 22-25

With regard to claims 2-10, which depend from claim 1, Applicants respectfully submit that the alleged combination of Chauvel-1 and Chauvel-2 does not render claims 2-10 unpatentable at least for the same reasons as claim 1.

With regard to claims 15-17 and 22-25, Applicants respectfully submit that the alleged combination of Chauvel-1 and Chauvel-2 does not render claims 15-17 and 22-25 unpatentable at least for reasons similar to those discussed above with respect to claim 1.

Claim 12

Claim 12 depends from claim 11 and thus recites “receiving a plurality of non-native instructions; executing the non-native instructions for an initial number of times using an interpreter; and compiling the non-native instructions into object code after executing the received non-native instructions for said initial number of times using the interpreter.”


The alleged combination of Chauvel-1 and Chauvel-2 does not disclose or suggest this element. At least for this reason, claim 12 is not rendered unpatentable over Chauvel-1 and Chauvel-2.

Conclusion

In view of the above, Applicants submit that the pending application is in condition for allowance and an early action so indicating is respectfully requested.

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Respectfully submitted,

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